

DECLARATION

As the below-named inventors, we declare that:

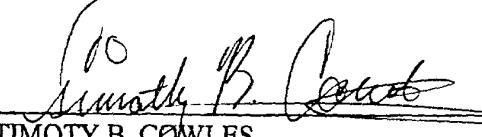
Our residences, post office addresses, and citizenships are as stated below under our names.

We believe we are the original, first, and joint inventors of the invention entitled "REFRESH CONTROLLER AND ADDRESS REMAPPING CIRCUIT AND METHOD FOR DUAL MODE FULL/REDUCED DENSITY DRAMS," which is described and claimed in the specification and claims of Patent Application No. 09/803,365, which we filed in the United States Patent and Trademark Office on March 8, 2001 and for which a patent is sought.

We have reviewed and understand the contents of the above-entitled specification, including the claims, as amended by any amendment specifically referred to herein (if any).

We acknowledge our duty to disclose information of which we are aware which is material to patentability and examination of this application in accordance with 37 C.F.R. § 1.56(a).

We further declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that the making of willfully false statements and the like is punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and may jeopardize the validity of any patent issuing from this patent application.



TIMOTY B. COWLES

Date 6/4/01

Residence : City of Boise, County of Ada
State of Idaho

Citizenship : United States of America

P.O. Address : 13345 West Woodspring Court
Boise, Idaho 83713

Michael A Shore

MICHAEL A. SHORE

PATRICK J. MULLARKEY

MICHAEL A. SHORE

Date _____
Residence : City of Boise, County of Ada
State of Idaho

Citizenship : United States of America

P.O. Address : 372 East Iowa Drive
Boise, Idaho 83706


PATRICK J. MULLARKEY

Date June 4 2001
Residence : City of Meridian, County of Ada

Citizenship : United States of America
P.O. Address : 2883 North Shore Avenue
 Meridian, Idaho 83742

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Timothy B. Cowles, Michael A. Shore, Patrick J. Mullarkey Attorney Docket No.: 500792.01
Serial No. : 09/803,365 Group Art Unit : 2183
Filed : March 8, 2001 Examiner : Not yet assigned
Title : REFRESH CONTROLLER AND ADDRESS REMAPPING CIRCUIT AND METHOD FOR DUAL MODE FULL/REDUCED DENSITY DRAMS

Commissioner of Patents
Washington, DC 20231

ELECTION UNDER 37 C.F.R. §§ 3.71 AND 3.73(b) AND POWER OF ATTORNEY

Sir:

The undersigned, being Assignee of the entire interest in the above-identified application by virtue of an Assignment filed concurrently herewith, hereby elects, under 37 C.F.R. § 3.71, to prosecute the application to the exclusion of the inventors.

Assignee hereby appoints EDWARD W. BULCHIS, Reg. No. 26,847; PAUL T. MEIKLEJOHN, Reg. No. 26,569; GLENN P. RICKARDS, Reg. No. 29,428; DALE C. BARR, Reg. No. 40,498; KIMTON N. ENG, Reg. No. 43,605; BRIAN C. PARK, Reg. No. 45,519; MARK W. ROBERTS, Reg. No. 46,160; STEVEN H. ARTERBERRY, Reg. No. 46,314; PAUL F. RUSYN, Reg. No. 42,118; JOHN P. LUTHER, Reg. No. 32,261; D. C. PETER CHU, Reg. No. 41,676; and the attorneys and agents associated with the firm of **DORSEY & WHITNEY LLP**, Customer Number 27,076; along with MICHAEL L. LYNCH, Reg. No. 30,871; WALTER D. FIELDS, Reg. No. 37,130; CHARLES B. BRANTLEY, II, Reg. No. 38,086; KEVIN D. MARTIN, Reg. No. 37,882; and DAVID J. PAUL, Reg. No. 34,692, of Micron Technology, Inc., 8000 South Federal Way, Boise, Idaho 83716-9632, as its attorneys to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. Please direct all telephone calls to **Edward W. Bulchis** at (206) 903-8800 and telecopies to (206) 903-8820.

Please direct all communications to:

Edward W. Bulchis, Esq.
Customer No. 27,076
Dorsey & Whitney LLP
1420 Fifth Avenue, Suite 3400
Seattle, Washington 98101
(206) 903-8800

Pursuant to 37 C.F.R. § 3.73(b), the undersigned duly authorized designee of Assignee certifies that the evidentiary documents have been reviewed, specifically the Assignment to MICRON TECHNOLOGY, INC., filed concurrently herewith for recording, a copy of which is attached hereto, and certifies that to the best of my knowledge and belief, title remains in the name of the Assignee.

MICRON TECHNOLOGY, INC.
ASSIGNEE

6-6-01

DATE


Michael L. Lynch
Chief Patent Counsel

Enclosure:

Copy of Assignment

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Timothy B. Cowles, Michael A. Shore
and Patrickl J. Mullarkey

Serial No.: 09/803,365

Filed : March 8, 2001

For : REFRESH CONTROLLER AND
ADDRESS REMAPPING CIRCUIT
AND METHOD FOR DUAL MODE
FULL/REDUCED DENSITY DRAMS

Docket No. 500792.01

Disclosure No. 00-0519

Group Art Unit 2183

A S S I G N M E N T :

Enclosed for recording
 Previously recorded

Date: _____

Reel: _____

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned do hereby:

SELL, ASSIGN AND TRANSFER to Micron Technology, Inc. (the "Assignee"), a corporation of Delaware, having a place of business at 8000 South Federal Way, Boise, Idaho 83716-9632, the entire right, title and interest for the United States and all foreign countries, in and to any and all improvements which are disclosed in the application for United States Letters Patent, which was filed on March 8, 2001, and assigned Application No. 09/803,365 and is entitled "REFRESH CONTROLLER AND ADDRESS REMAPPING CIRCUIT AND METHOD FOR DUAL MODE FULL/REDUCED DENSITY DRAMS"; such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States of America;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

Covenant that, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for securing, maintaining and enforcing proper patent protection for such improvements and for vesting title to such improvements in the Assignee;

TG BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

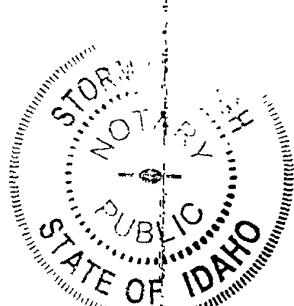
~~JOURNAL OF~~
TIMOTHY B. COWLES

Date: 6/4/01

STATE OF IDAHO)
County of ADA)
ss.

BEFORE ME, this 4 day of June, 2001, personally appeared the above-named individual, to me known to be the person who is described in and who executed the foregoing assignment instrument and acknowledged to me that he executed the same of his own free will for the purpose therein expressed.

SEAL



Notary or Consular Officer
My Commission Expires 9/12/0

My Commission Expires 7/12/04

Michael A Shore

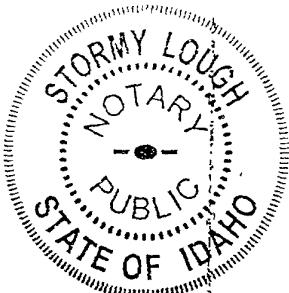
MICHAEL A. SHORE

Date: 6-4-2001

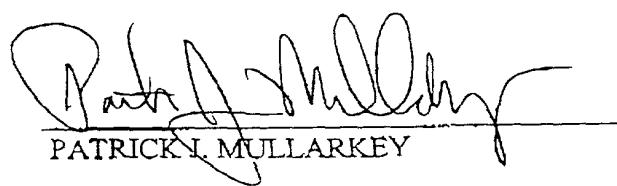
STATE OF IDAHO)
) ss.
County of ADA)

BEFORE ME, this 4 day of June, 2001, personally appeared
the above-named individual, to me known to be the person who is described in and who executed
the foregoing assignment instrument and acknowledged to me that he executed the same of his
own free will for the purpose therein expressed.

SEAL



Stormy Lough
Notary or Consular Officer
My Commission Expires 7/12/04


PATRICK J. MULLARKEY

Date: June 4 2001

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